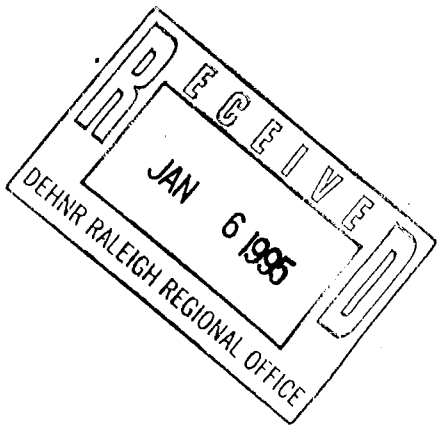
ReUse Technology, Inc.

...progress today, with respect for tomorrow.

RH faxed 828-0804 John Austin

January 4, 1995



Mr. Bob Harding
North Carolina Department of Environment,
Health, and Natural Resources
Division of Solid Waste Management
800 Barrett Drive
Raleigh, North Carolina 27609

Re: Swift Creek Project
Highway 301
Nash County

Dear Mr. Harding:

Our consultant, Triangle Environmental, Inc., has completed their study of the groundwater separation at our Swift Creek project. As promised during your December 15, 1994 site visit, we are forwarding you a copy of their final report. The results of their study show that adequate groundwater separation exits throughout the project with the exception of the northeastern boundary of the site. At this location, soil was excavated to construct an earthen berm and to provide cover material. Ash was placed back into this excavation without adequate groundwater separation. As you saw during your site visit, we have removed the ash in this area and backfilled with soil to provide the necessary separation. This work was completed on December 16, 1994.

We appreciate your cooperation on this project. If you have any questions, please don't hesitate to call.

Sincerely,

Robert J. Waldrop
Vice President, Environmental

RJW/cmm
Enclosure

B:\RJW\HARDING.LTR
FILE 301.3.020.1.12

Post-it® Fax Note 7671	Date 2/24/97	# of pages ▶ 8
To John Austin	From Ben Barnes	
Co./Dept. AHY	Co. Duo of Waste Man	
Phone #	Phone # 919 571-4700	
Fax # 919 828-0804	Fax #	

100 Chastain Center Boulevard • Suite 155 • Ke ... Fax 404 425-7681

TRIANGLE ENVIRONMENTAL INC.

Raleigh, NC
919-876-5115
Charlotte, NC
704-527-5115

December 28, 1994

Mr. Robert J. Waldrop
ReUse Technology, Inc.
100 Chastain Center Boulevard
Suite 155
Kennesaw, Georgia 30144

Subject: Groundwater Table Investigation
Swift Creek Project
Rocky Mount, North Carolina
Triangle Project Number 461-0109

Dear Mr. Waldrop:

Triangle Environmental, Inc. (Triangle) is pleased to submit this report for the groundwater table investigation at the Swift Creek Project. We appreciate the opportunity to provide you with consultation and environmental services and look forward to working with you in the future. Thank you for your consideration.

If you have any additional questions, or need additional information, please contact us at 876-5115.

Sincerely,

TRIANGLE ENVIRONMENTAL, INC.

John Sherrill

John (Jack) Sherrill
Groundwater Section Manager

Keith A. Anthony

Keith A. Anthony, P.E.
Chief Engineer

JAN 3 '95

INTRODUCTION

ReUse Technology Inc. (ReUse) retained Triangle Environmental, Inc. (Triangle) to investigate the relationship of the ash fill material and the mean high seasonal water table at the Swift Creek Project. This site is located along Highway 301 at Swift Creek near Battleboro, North Carolina. On November 11, 1991, ReUse initiated the Swift Creek Project which would use coal ash as structural fill material for the preparation of a commercial property. One of the guidelines agreed upon by the North Carolina Division of Solid Waste Management and ReUse for the Swift Creek Project is that "No ash will be placed within one foot of the seasonal high water table."

On November 26, 1994, ReUse representatives Robert Waldrop and Steve Critchfield met at the Swift Creek Project with Keith Anthony, PE, and John Sherrill, Hydrogeologist, of Triangle to address concerns of the relationship of the ash fill material and the seasonal high water table. After site reconnaissance and discussion, the excavation of test trenches was selected as the best method for conducting the investigation.

INVESTIGATION

On December 6, 1994, ReUse contracted a back hoe and operator for excavation of test trenches at the Swift Creek Project. A Hydrogeologist from Triangle selected three areas for investigation. Two locations, Trenches #1 and #2, were chosen in areas where groundwater was anticipated to be the closest to the surface. Trench #3 was chosen in an area that would be representative of the overall site conditions.

The three trenches were excavated to a depth ranging between 7 and 8 feet. The trenches were approximately 14 feet long and 3.5 feet wide. The contact between the ash fill material and the soil were clearly discernible in vertical profile. The vertical thickness of the overlying ash fill material was approximately 2.4 feet in Trenches #1 and #2 and 3.0 feet in Trench #3. The soil underlying the ash fill material was described in the field as a mottled gray, yellow and orange clayey silt that graded to a yellowish gray fine sand with some silt and less clay below a depth of 2 feet. Diagrams of the trenches are shown in Figure 1.

The location of the Swift Creek Project on the Soil Survey of Nash County, 1989, published by the United States Department of Agriculture - Soil Conservation Service, is shown on Figure 2. The Swift Creek Project site contains Altavista (AaA) and Norfolk (NoB) soils. All of the test trenches were located in the portion of the site mapped as Altavista soils. According to the Soil Survey of Nash County, the Altavista has the higher water table which ranges between 1.5 and 2.5 feet below the ground surface and occurs during the months of December through March. This information from the Soil Survey suggests that the site should have adequate separation between the bottom of the ash fill material and the seasonal high water table. The time of the groundwater investigation for the site coincides with the period of the seasonal high water table as listed by the Soil Survey. Field observations also indicated that the surface water levels in the adjacent wetland areas appeared to be at the seasonal high level.

No geotechnical problems were encountered during the excavation of the test trenches. The side walls of the trenches remained stable during the excavation. Upon completion of each trench, groundwater was observed seeping in from the bottom. To facilitate documentation, one foot intervals were measured in relation to the soil/ash fill interface and marked on the side wall with spray paint. Measurements of the rising groundwater levels were recorded over a period of approximately 70 hours. A graph of the rising groundwater levels in the three trenches is shown on Figure 3. As shown by the graph, the major adjustment of the water level in the test trenches occurred during the first 24 hours and an apparent equilibrium was established after 70 hours. At the apparent equilibrium, the separation of the groundwater table and the bottom of the ash fill material was 1.1 feet in Trench #1, 1.9 feet in Trench #2, and 3.3 feet in Trench #3.

As stated in the above introduction, one of the guidelines previously agreed upon by the North Carolina Division of Solid Waste Management and ReUse for the Swift Creek Project is that "No ash will be placed within one foot of the seasonal high water table." Trench #3 is located in the central portion of the site and is thought to be representative of the general site conditions. In this area, an approximate three foot separation exists between the groundwater table and the bottom of the ash fill material. Lesser separations were detected in test Trench # 1 and #2 located along the suspect northeastern border of the site. After a period of 24 hours, the groundwater table in Trench #1 appeared to reach equilibrium at 1.1 feet below the soil/ash fill interface. This separation remained constant

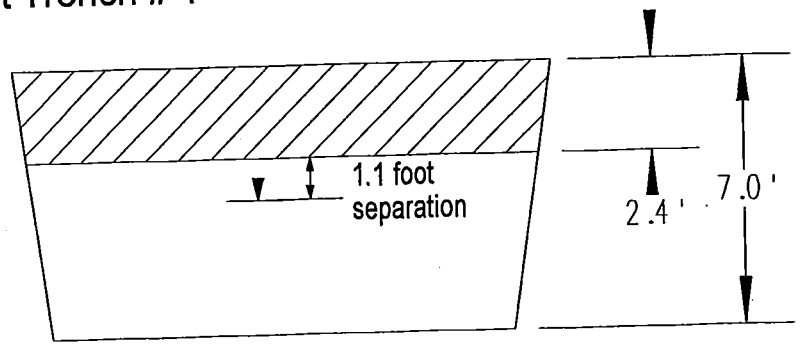
during the rest of the 70 hour observation period with the exception of one reading taken after 45 hours when a 1.0 foot separation was recorded.

A problem with separation of the groundwater table and the bottom of the ash fill material was identified in test Trench #2. This test trench was excavated perpendicular to the northeastern boundary of the site. In the southern portion of the trench, the groundwater table is approximately 1.9 feet below the bottom of the ash fill. However, in the northern portion of the trench, the ash fill is in contact with the apparent groundwater table. ReUse explained that along and parallel to the northeastern boundary of the site, soil was borrowed for the construction of the perimeter berm. The approximate dimensions of the borrow area extend 550 feet from the northeastern corner of the site to the northern corner of the site along Highway 301, 27 feet wide, and 2 feet below the natural soil surface.

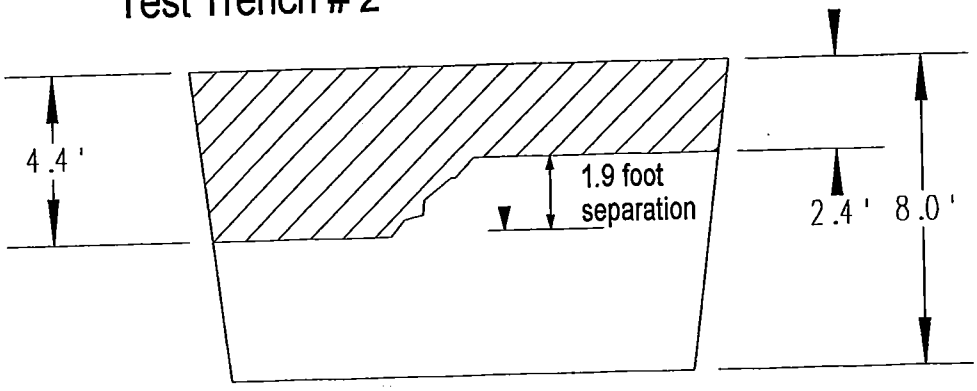
CONCLUSION

Generally, the Swift Creek Project appears to be within the construction guidelines agreed upon by the North Carolina Division of Solid Waste Management and ReUse. A problem was identified along the northeastern boundary of the site where soil material had been excavated to construct the perimeter berm. In the area where soil had been borrowed, the ash fill material was found to be in contact with the seasonal high water table. It is Triangle's understanding that ReUse plans to remediate this area by first excavating the ash material in the area where the borrowing had occurred and then back filling the area with local soil which is staged at the site.

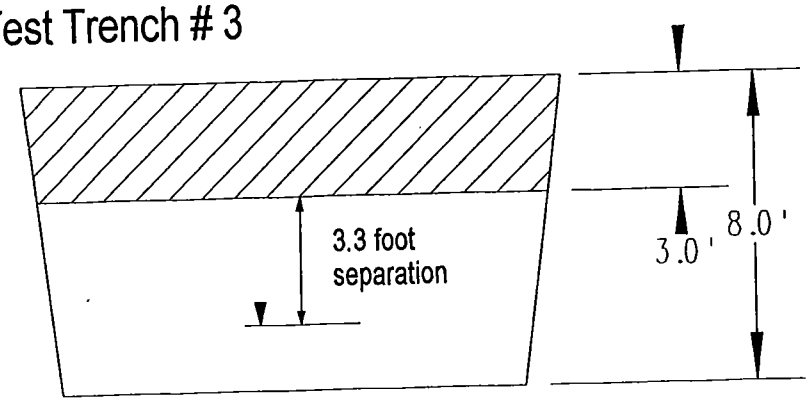
Test Trench # 1



Test Trench # 2



Test Trench # 3



Legend

ground water level

TRIANGLE ENVIRONMENTAL INC.
P.O. Box 41087
Raleigh, N.C. 27629
(919) 876-5115
(800) 849-5115
(919) 790-8273 fax

PROJECT : ReUse- Swift Creek Project

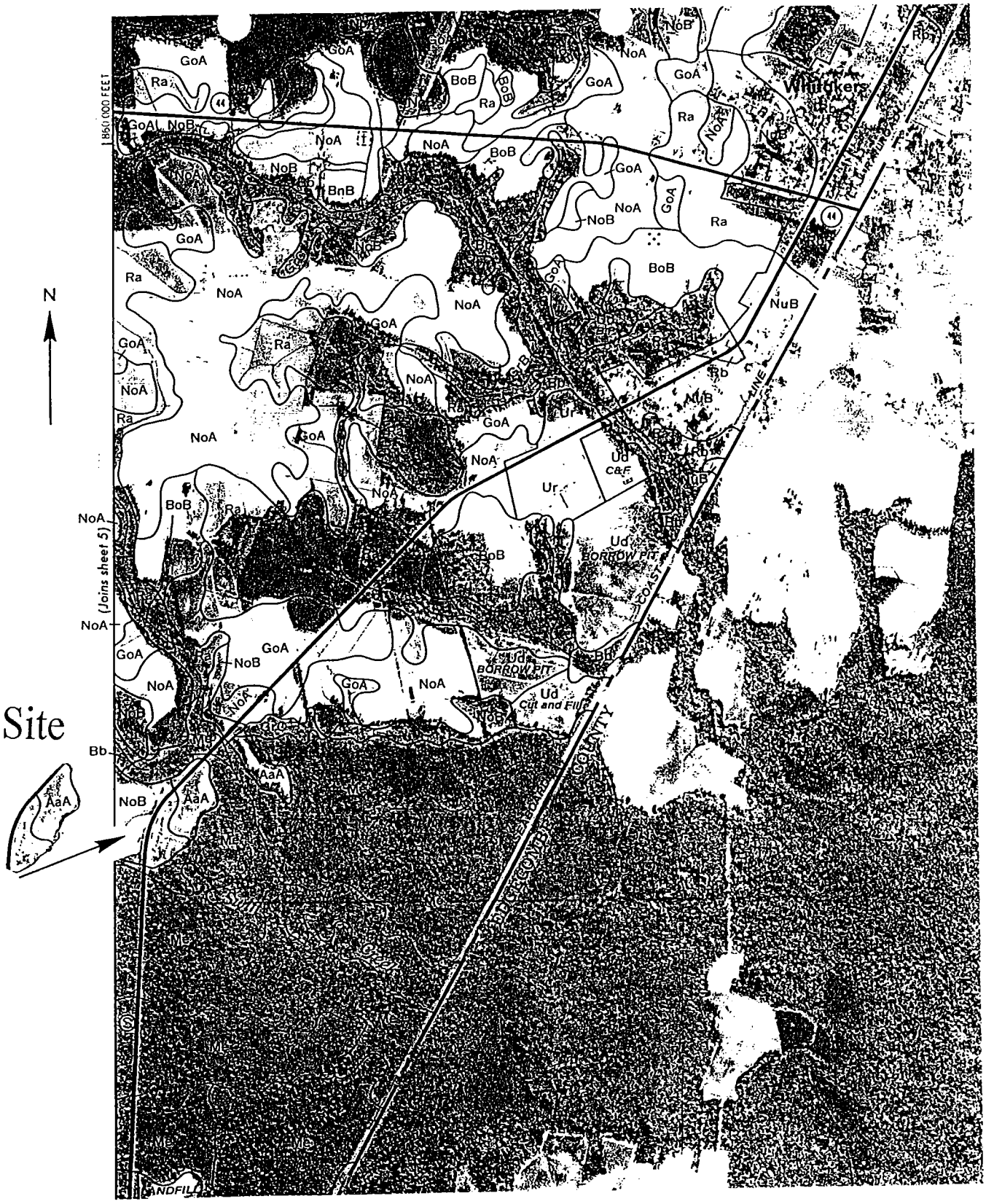
Test Trench Diagrams

PROJ. # 461-0109

DRWN BY : LGW

SCALE : 1" = 5'

FIGURE : 1



TRIANGLE ENVIRONMENTAL INC.
P.O. Box 41087
Raleigh, N.C. 27629
919) 876-5115
800) 849-5115
919) 790-8273 fax

PROJECT : ReUse- Swift Creek Project

Soil Survey Map of Nash County, NC

PROJ. # 461-0109

DRWN BY :

SCALE : 1" = 2000'

FIGURE : 2

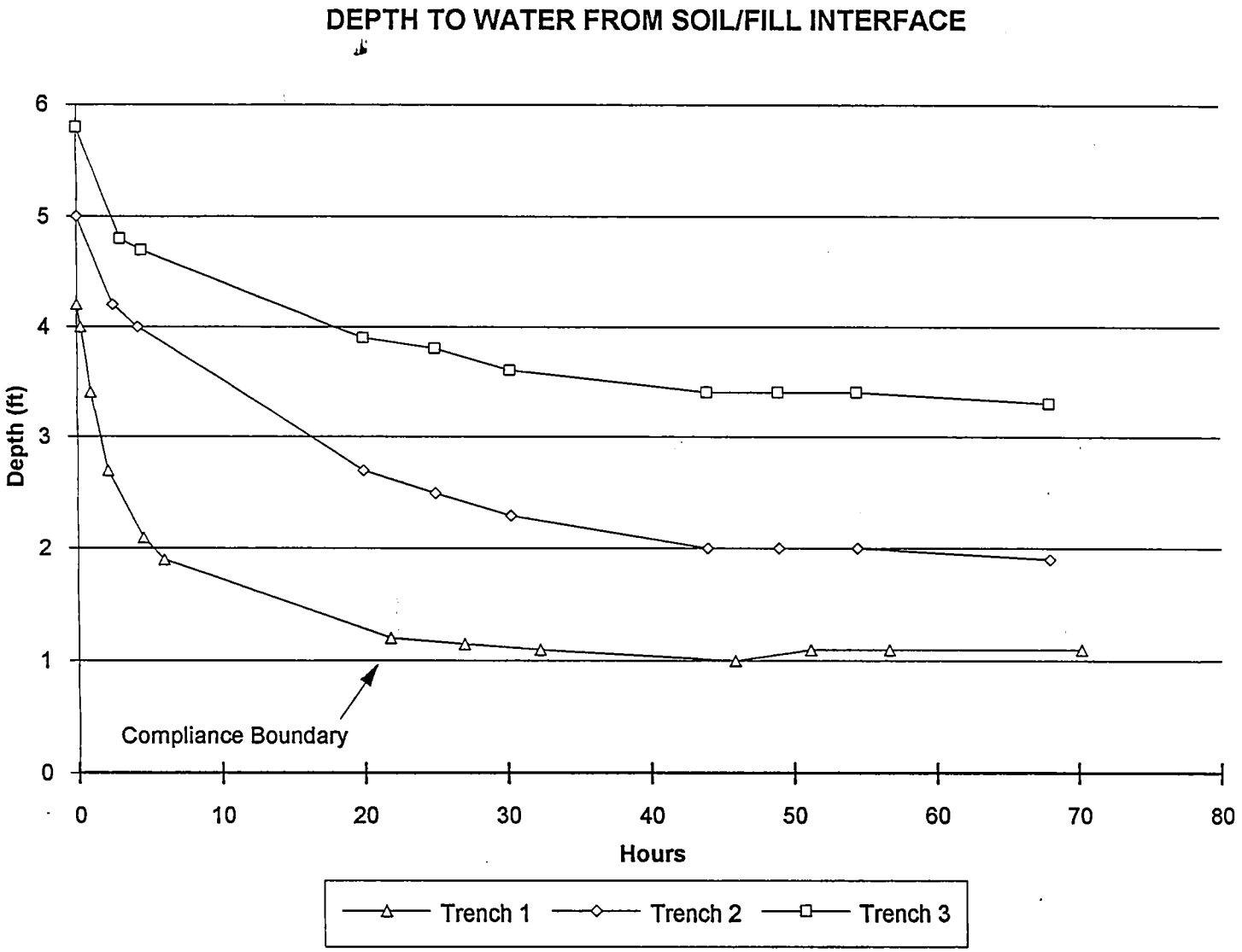

DEPTH TO WATER FROM SOIL/FILL INTERFACE
Depth (ft)
6
5
4
3
2
1
0
0
10
20
30
40
50
60
70
80
Hours
Compliance Boundary
Trench 1
Trench 2
Trench 3

Figure 3

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
South Central Regional Office • 225 Green Street, Suite 601 • Fayetteville, North Carolina 28301
Telephone: (919) 486-1191 Fax: (919) 486-1791

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

December 3, 1991

Robert J. Waldrop
Environmental Manager
ReUse Technology, Inc.
100 Chastain Center Blvd., Suite 155
Kennesaw, Georgia 30144

Re: Coal Ash Utilization
Highway (U.S.) 301, Swift Creek, Battleboro, N.C.
Nash County

Dear Mr. Waldrop:

The Solid Waste Section has reviewed the referenced project for the use of coal flyash as structural fill. Based upon the information received, the project appears to meet the guidelines previously agreed to for such reuse.

Even though a specific solid waste permit is not required, this approach by the Section does not exempt the activity from other local, state or federal regulations including, but not limited to, zoning restrictions, flood plain regulations, wetland restrictions or sedimentation/erosion control regulations.

If you have any questions, do not hesitate to contact our office.

Sincerely,

Terry F. Dover

Terry F. Dover
Eastern Area Supervisor
Solid Waste Section

TFD/wlf

cc: Jim Coffey
Fred Wood
Central Files-Nash County-N/F

Post-it® Fax Note 7671	Date 6/29/06	# of pages ▶ 1
To Nancy Scott	From M. Poindexter	
Co./Dept. NC AGO-Env.	Co. NC DENR-DWM	
Phone # 919-716-6978	Phone # 919-508-8513	
Fax # 919-716-6939	Fax #	

ReUse Technology, Inc.

PERMITTING • DISPOSAL PLANNING • REUSE

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 22, 1991

Mr. Terry Dover
North Carolina Department of
Environment, Health and Natural
Resouces
Solid Waste Management Section
225 Green Street
Wachovia Building, Suite 601
Fayetteville, NC 28301

Re: Coal Ash Utilization
Boogle Bay Raceway - Cumberland County
Highway 301 at Swift Creek - Nash County

Dear Mr. Dover:

Enclosed are the pH test results for coal ash to be used at the subject projects. I have also enclosed two additional copies of the project drawings. If any additional information is needed, please call me at (404)425-7676.

Yours truly,

REUSE TECHNOLOGY, INC.

Robert J. Waldrop
Environmental Manager

RJW/mlb

Enclosures

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 21, 1991

ReUse Technology, Inc.
100 Chastain Center Blvd.
Suite 155
Kennesaw, GA 30144

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. RT01887 Project account code: RT001
Location code: FLYASH
Location Description: FLYASH FROM STRUCT FILL PRJ
Client ID #: HOPEWELL FLY
Laboratory submittal date: 10/21/91

Parameter	Result
pH	6.70

If there are any questions regarding this data, please do not hesitate to call.

Sincerely,

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 21, 1991

ReUse Technology, Inc.
100 Chastain Center Blvd.
Suite 155
Kennesaw, GA 30144

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. RT01886 Project account code: RT001
Location code: FLYASH
Location Description: FLYASH FROM STRUCT FILL PRJ
Client ID #: PORTSMOUTH FLY
Laboratory submittal date: 10/21/91

Parameter	Result
pH	4.10

If there are any questions regarding this data, please do not hesitate to call.

Sincerely,

Gordon LaPean
Laboratory Manager

ReUse Technology, Inc.
PERMITTING • DISPOSAL PLANNING • REUSE

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

(1)

November 11, 1991

Mr. Terry F. Dover
North Carolina Department of Environment
Health and Natural Resources
Solid Waste Management Section
225 Green Street
Wachovia Building, Suite 601
Fayetteville, NC 28301

Re: Coal Ash Utilization
Highway 301 - Swift Creek - Battleboro, NC
Nash County

Dear Mr. Dover:

We are seeking approval to use coal ash on approximately 25.0 acres of commercial property located along Highway 301 at Swift Creek near Battleboro, North Carolina. We propose to use the coal ash as structural fill material in development of the tract shown in the enclosed plan. The coal ash to be used in this project will be obtained from the Cogentrix power plants located in Lumberton, Elizabethtown, Kenansville, Rocky Mount, Hopewell, and Portsmouth. The results of TCLP tests performed on representative samples of coal ash from these plants are also enclosed. The placement will be conducted in the same manner as our projects previously approved by NCDEHNR.

As previously approved, we will agree to the following conditions:

1. To prevent dusting, all ash will be conditioned to 15% moisture and transported in tarped dump trucks.

2. To facilitate compaction, the moisture of the ash will be adjusted at the site by use of a water wagon.

3. All coal ash structural fill within the development area will be capped with a minimum of 6 inches of earth cover.

4. Slopes will receive 12 inches minimum compacted earth and 6 inches of topsoil.

5. Site development will be in accordance with an approval soil erosion and sediment control plan.

6. Approval for coal ash fill shall become voidable unless the facility is constructed in accordance with the approved plans, specifications, and supporting data.

7. Approval is subject to the nature and volume of ash materials discussed and other supporting data.

8. The facility shall be properly maintained and operated at all times.

9. This approval is not transferrable.

10. In the event that the facility fails to perform satisfactorily, including the creation of nuisance and conditions, ReUse Technology shall take such immediate corrective action as may be required by the Solid Waste Management Section including the construction of additional or replacement waste water treatment or disposal facilities.

11. Approval may be rescinded unless the reuse program will protect the assigned water quality and groundwater quality standards.

12. All ash utilization on roadways shall be performed in accordance with the North Carolina Department of Transportation specifications.

13. The facility shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of the facility.

14. The issuance of this approval shall not relieve ReUse Technology of the responsibility for damages to surface water or groundwater resulting from the operation of this facility.

15. Adequate records of the ash reuse program shall be maintained by ReUse Technology. These records shall include but are not necessarily limited to the following:

a. date of ash application,
b. type of ash used,
c. type of application,
d. volume of ash applied in tons,
e. location of use, and
f. ash receiver.

16. No ash will be placed within 100 feet of any water supply well.

17. No ash shall be placed within one foot of the mean seasonal high water table.

18. ReUse Technology shall supply an ash analysis to all users.

19. The following buffers shall be maintained:

a. 100 feet between application area and any residence, place of business, or place of public assembly, unless permission is first obtained by the property owner.

b. 50 feet between any application area and any stream, creek, lake, pond or other surface water body.

c. 100 feet between application area and property lines unless permission is first obtained from adjacent property owners.

20. Adequate provisions shall be taken to prevent wind erosion and surface runoff from conveying pollutants from the ash application area onto the adjacent property or into the surface waters.

21. The following uses of ash are hereby authorized:

a. Fly ash and bottom ash may be used for structural fills such as roadway embankments and foundations.

b. Fly ash and bottom ash may be used for backfill materials around water, sewer, and storm drain piping.

c. Bottom ash may be used for secondary road overlay.

Your continued cooperation with our ash reuse program is greatly appreciated. We would like to begin work on this project by December 10, 1991. If there are any questions, please call Bob Waldrop at (404)425-7676.

Yours truly,

Robert J. Waldrop
Environmental Manager

RJW/mlb

Enclosures

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 11, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT01887
Location: Cogentrix Hopewell
Composite Fly Ash and Bottom Ash
Laboratory Submittal Date: 10/21/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT01887		Regulatory Limit
Arsenic	<0.03		5.0
Barium	<0.2		100.0
Cadmium	0.03	.01	1.0
Chromium	0.08	.05	5.0
Lead	0.7	.05	5.0
Mercury	<0.0002		0.2
Selenium	<0.05	.01	1.0
Silver	<0.02		5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 11, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT01886
Location: Cogentrix Portsmouth
Composite Fly Ash and Bottom Ash
Laboratory Submittal Date: 10/21/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT01886		Regulatory Limit
Arsenic	<0.03		5.0
Barium	<0.2		100.0
Cadmium	0.03	.01	1.0
Chromium	0.06	.05	5.0
Lead	0.2	.05	5.0
Mercury	<0.0002		0.2
Selenium	0.09	.01	1.0
Silver	<0.02		5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

October 2, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT01062
Location: Cogentrix Elizabethtown Fly Ash
Laboratory Submittal Date: 07/12/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT01062		Regulatory Limit
Arsenic	<0.03		5.0
Barium	1.5	1.0	100.0
Cadmium	0.05	.01	1.0
Chromium	<0.03		5.0
Lead	<0.1	.05	5.0
Mercury	<0.0002		0.2
Selenium	0.23	.01	1.0
Silver	<0.02		5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 11, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT02076
Location: Cogentrix Lumberton Fly Ash
Laboratory Submittal Date: 11/06/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT02076	Regulatory Limit
Arsenic	0.39	5.0
Barium	<0.2	100.0
Cadmium	0.09	1.0
Chromium	<0.03	5.0
Lead	0.28	5.0
Mercury	<0.0002	0.2
Selenium	0.09	1.0
Silver	0.03	5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7676
Fax (404) 425-7681

November 11, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT01891
Location: Cogentrix Kenansville Fly Ash
Laboratory Submittal Date: 10/21/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT01891		Regulatory Limit
Arsenic	0.11	.05	5.0
Barium	<0.2		100.0
Cadmium	0.03	.01	1.0
Chromium	<0.03		5.0
Lead	<0.1	.05	5.0
Mercury	<0.0002		0.2
Selenium	0.14	.01	1.0
Silver	<0.02		5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean

Gordon LaPean
Laboratory Manager

RT Environmental Services
A Division of ReUse Technology, Inc.

100 Chastain Center Blvd.
Suite 155
Kennesaw, Georgia 30144
Phone (404) 425-7878
Fax (404) 425-7681

November 11, 1991

The following TCLP analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. - RT01886
Location: Cogentrix Portsmouth
Composite Fly Ash and Bottom Ash
Laboratory Submittal Date: 10/21/91

The first table gives a brief description of the AA method used, the minimum detection level and reporting units for each metal. The second table gives the actual analytical results expressed in the appropriate reporting units given in Table 1.

Table 1

	AA Method	Minimum Detection Level	Reporting Units
Arsenic	Furnace	0.03	mg/L (ppm)
Barium	Flame	0.2	mg/L (ppm)
Cadmium	Flame	0.01	mg/L (ppm)
Chromium	Flame	0.03	mg/L (ppm)
Lead	Flame	0.1	mg/L (ppm)
Mercury	Cold Vapor	0.0002	mg/L (ppm)
Selenium	Furnace	0.05	mg/L (ppm)
Silver	Flame	0.02	mg/L (ppm)

Table 2

	RT01886	Regulatory Limit
Arsenic	<0.03	5.0
Barium	<0.2	100.0
Cadmium	0.03	1.0
Chromium	0.06	5.0
Lead	0.2	5.0
Mercury	<0.0002	0.2
Selenium	0.09	1.0
Silver	<0.02	5.0

Please feel free to call if you have any questions concerning these data.

Sincerely,

Gordon LaPean

Gordon LaPean
Laboratory Manager